



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/523,512 | 02/04/2005 | Roland Liebe | 2002P13083WOUS | 1290 |

7590 11/29/2006
Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER

DINH, TIEN QUANG

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

3644

DATE MAILED: 11/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/523,512

Applicant(s)

LIEBE ET AL.

Examiner

Tien Dinh

Art Unit

3644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-42 is/are pending in the application.
- 4a) Of the above claim(s) 34-42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 2/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of group I in the reply filed on 9/14/06 is acknowledged.

Claims 34-42 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 9/14/06.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 26, 27, 30, and 32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 26, it is not understood how the flow duct has two profiles that oscillate with the same angular frequency ω and an opposite phase about their respective axis of rotation and the axes of rotation are oriented parallel to each other. Furthermore, could this be a translation error?

Claim 27, it is not understood how the profile be perpendicular to the flow direction of the flow medium. Where is this disclosed? Where is this shown? If it is arranged perpendicular to the flow, how can it generate eddies or destroy eddies?

Art Unit: 3644

Claim 30, what is this device that follows the device? In addition, the applicant seems to be using confusing terms that does not distinguish one part from another.

Claim 32, what is this axial cascade for the throughflow? How does it work?

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 30 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 30, line 2, "a device" is a double inclusion of elements in view of claim 23, line 1. Are these the same "devices"?

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 23-31, and 33 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Graaf (DE 3343296).

Graaf discloses a device 6 (rotating around an axis of rotation that is perpendicular to the flow direction) that is arranged in a duct 1 with an external drive 7 that is used to move the

Art Unit: 3644

device 6 that is capable of generating or destroying eddies. The drive 7 rotates the device so that it can have an angular frequency w and a certain angle (θ) with respect to the fluid flow.

Re claim 24, please note that this claim seems to be claiming a design choice. Graaf's device seems to disclose what is claimed in that the shape and size of the profile are selected...has a predetermined value. One skilled in the art would also have shaped the device so that a certain flow characteristic will result to optimize the fluid flow so the system can operate at the optimal level.

RE claims 26 and 31 as best understood, the profiles shown in figure 1 and 2 can oscillate at the same angular frequency and opposite phase about their respective axis of rotation.

Re claim 27, the profile can be arranged perpendicular to the flow via drive 7.

RE claim 28, the profile can be oscillated to make it be parallel to the flow direction.

Re claim 29, the displacement of the profile coincides with the rotation around the axis of rotation.

Re claim 30, as best understood, the "device" that follows the device is numbered 10.

Re claim 32, it would have been obvious to one skilled in the art to have used the profile in a gas turbine to control the flow for the optimal operation of the gas turbine. Plus, this claim is intended use and carries no patentable weight.

Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Graaf in view of Erwin 3241771.

Art Unit: 3644

Graaf discloses all claimed parts except for the use of cascades to control the flow of fluids. However, Erwin discloses that cascades are well known in the art. See figures 1-6.

It would have been obvious to one skilled in the art at the time the invention was made to have used cascades in Graaf's system as taught by Erwin to allow the fluid to flow as desired to optimize the operation of the system.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Frey, Lee, Mouton, and Cornell disclose fluid control means.

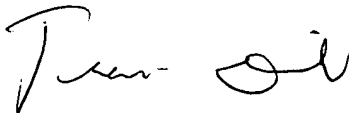
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tien Dinh whose telephone number is 571-272-6899. The examiner can normally be reached on 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teri Luu can be reached on 571-272-7045. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3644

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TD

A handwritten signature in black ink, appearing to read "T. J. Smith" or similar, with a stylized flourish at the end.